

# PHAR 6971: Geriatric Pharmacotherapy

Course syllabus Spring  
2020  
2 Credits

This course adheres to the items listed in the College of Pharmacy Central Syllabus:

[https://docs.google.com/a/umn.edu/document/d/1artQ5e1rbzxe8IEtWo7BE8k8snZAEgMMz\\_QcW8yJ-ll/edit?pli=1](https://docs.google.com/a/umn.edu/document/d/1artQ5e1rbzxe8IEtWo7BE8k8snZAEgMMz_QcW8yJ-ll/edit?pli=1)

## Meeting Times & Locations

| Day      | Time                 | Duluth Room | Twin Cities Room |
|----------|----------------------|-------------|------------------|
| Tuesdays | 10:10 am to 12:05 pm | LSci 163    | Moos 1-451       |

Course Website: <https://canvas.umn.edu/courses/162644>

## Instructional Team

Technology Help, Duluth: 218-726-8847 [itsshelp@d.umn.edu](mailto:itsshelp@d.umn.edu)  
Technology Help, Twin Cities: 612-301-4357 [help@umn.edu](mailto:help@umn.edu)

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**Course Directors:**

**Duluth:**

Mike Swanoski, Pharm.D.,BCGP, FASCP

Associate Professor

232 B Life Science

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**Twin Cities:**

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Clinical Pharmacist

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## **Course Instructors**

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## **Course Lecturers:**

Sakina Zaheer, PharmD

PGY-2 Resident

St. Luke's Hospital

Duluth, MN

Cassie Furr, PharmD

MTM Pharmacist

Essentia Health Duluth, MN

Matt Just, PharmD

Long Term Care Consultant Pharmacist

Thrifty White

Sean Kempke, MD

Family Practice Physician

Essentia Health Hermantown, MN

Stephen Shuman, DDS Associate

Associate Professor

Department of Primary Dental Care &

Director Oral Health for Older Adults

University of Minnesota School of Dentistry

Jennifer Olson, MD

Geriatrician

Park Nicollet Clinical Primary Care

Kelsey Melgaard, PharmD

PGY-1 Resident

St. Luke's Hospital

Duluth, MN

Mary McGuiggan, PharmD, BCGP  
Director of Preceptor Development  
Professional Education Department  
University of Minnesota College of Pharmacy

Tim Stratton, PhD, MS, BCPS, FAPhA  
Senior Associate to the Dean for Assessment and Accreditation  
University of Minnesota College of Pharmacy  
Supervising Pharmacist-HOPE clinic

Allison Knutson, PharmD, BCACP  
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## **Teaching Assistants**

### **Twin Cities:**

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### **Canvas TA**

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### **Duluth:**

Cole Scheel  
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## Course Description

### Course content:

This course is designed to prepare student pharmacists to be knowledgeable about diseases/conditions primarily seen in geriatric patients and assess and evaluate the appropriate use of medication in older adults. Students will gain knowledge in setting- appropriate goals of therapy, in patients with multiple comorbidities and will develop skills to incorporate functional, cognitive, and health related quality of life aspects into formulating appropriate pharmacotherapy care plans. The course will focus on the pharmacotherapy used to treat diseases and conditions in older adults with an emphasis on physiologic changes of aging and how these changes impact pharmacokinetics and pharmacodynamics aspects of medication use in the elderly. At the conclusion of the course students will be expected to apply knowledge learned in the course to design and monitor patient- specific pharmacotherapy plans for older adults and to educate patients on appropriate medication use as it relates to the unique aspects of aging.

### Course format:

This course will meet for 2 hours 1 day per week. Class time will be used for lectures, large and small group case discussions, and exams. Students will be assigned required and/or supplemental readings to enhance student knowledge in the unique aspects of geriatric pharmacy practice and to augment lecture content.

## Prerequisites

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- Students must have completed all required Year 2 and Year 3 fall PharmD courses successfully before beginning this course.
- This course will build on material learned previously in the PharmD curriculum. Students will be expected to apply knowledge of pharmacokinetics, biopharmaceutics, pharmacotherapy, and evidence based medicine.

# Requirements

## Course Materials

### Required Reading:

1. **Being Mortal: Medicine and What Matters in the End** by Atul Gawande-access your public library or buy it from amazon or other booksellers. Look for used copies.
2. Required articles will be posted on Canvas under that lecture delivery date

### Suggested Textbook

Hutchinson, LC, Sleeper, RB. **Fundamentals of Geriatric Pharmacotherapy, 2nd Edition: Bethesda, MD. American Society of Health System Pharmacists**

- **Textbook can be accessed through Canvas site**
  - Students are strongly urged to review the suggested Chapter readings prior to class to help with the understanding of lecture material.
  - Supplemental readings will be made available to interested students by arrangements with course directors. Such readings may be valuable for future reference.

## Computer / Technology Requirements

The University of Minnesota computer requirements are listed here:

- Canvas: This course will use Canvas to distribute resources and host course information. See Canvas setup requirements at <https://it.umn.edu/technology/resources/69116/all?km>.
- Internet-enabled device capable of accessing Canvas (lap-top computer)
- Internet-enabled device capable of accessing ParticiPoll (computer, tablet, smart phone, etc.)

## Course Communications

Course directors will communicate with students through Canvas announcements via email. We suggest that you check your U of MN email daily. Students may email questions or concerns to either Dr Swanoski or Dr Scheiner.

## Attendance Policy

Students are expected to attend every class. Lectures will not be recorded when there are guest lecturers. Other Lectures may or may not be recorded depending on lecturer's preference and/or recording media availability/capability. Exams will include materials delivered by all lecturers.

# Goals & Objectives

## Learning Objectives

1. Explain the basic pathophysiology associated with common conditions seen in geriatric patients

*Domain Competencies: 2.0; 6.3.1; 6.3.2; 6.3.3*

*Scientific Foundations: 1.1.1; 1.2*

2. Compare and contrast available pharmacotherapeutic options to manage conditions commonly seen in geriatric patients, with particular focus on potentially inappropriate medications for geriatric patients

*Domain Competencies: 1.1; 1.2; 2.0; 2.1 ;2.2; 2.3; 2.4; 6.0; 6.1; 6.3.1; 6.3.2; 6.3.3; 6.4.2; 6.4.5; 6.4.6*

*Scientific Foundations: 3.2.2; 3.2.4; 6.1.10; 6.4*

3. Evaluate, monitor and modify pharmacotherapeutic plans for managing patients with conditions commonly seen in geriatric patients with comorbidities and taking multiple medications

*Domain Competencies: 1.1; 1.2; 2.0; 2.1 ;2.2; 2.3; 2.4; 6.0; 6.1; 6.3.1; 6.3.2; 6.3.3; 6.4.2; 6.4.5; 6.4.6*

*Scientific Foundations: 6.4; 6.5*

4. Identify, resolve and/or prevent drug therapy problems, and develop pharmacotherapeutic goals for patients with conditions commonly seen in geriatric patients.

*Domain Competencies: 1.1; 1.2; 1.5; 1.8; 2.0; 2.1; 2.2; 2.3; 2.4; 4.2; 6.0; 6.1; 6.3.1; 6.3.2; 6.3.3; 6.4.2; 6.4.5; 6.4.6*

*Scientific Foundations: 6.4; 6.7.3*

5. List barriers to effective communication of drug and adherence information in older adults and identify strategies to handle them.

*Domain Competencies: 1.4; 2.0; 2.1; 2.2; 4.2; 6.4.6 Scientific Foundations: 5.8.3*

6. Describe the interrelationship between social and economic issues of aging and incorporate these when formulating a medication assessment and plan for an older adult

*Domain Competencies: 1.4; 4.2 6.4.6*

*Scientific Foundations: 5.1.5; 5.7.1; 5.7.6; 5.*

# Assessments and Grading

## Assignments and learning activities

- Exams will be held via canvas and will consist of multiple choice questions and case based scenarios. Materials from lectures, handouts, case presentations, and required readings will be included in course examinations.
- Small Group Case discussions. Case studies will be posted on the Canvas site approximately a week prior to in-class discussions. A write up of the case will be due through Canvas on the day of the case discussion before class. Credit will be given only if a case write up is posted AND the student attends the case discussion.
- Book assignment and reflections. Students will read the book *Being Mortal: Medicine and What Matters in the End* by Atul Gawande and will write three reflections based on the chapters read. Reflections will be posted on course Canvas site for comment by other students from their small groups.

| Assessment                              | Points |
|---|--------|
| Book Discussion Reflections             | 3      |
| Small Group Case Discussion (1)         | 5      |
| Small Group Case Discussion (2)         | 5      |
| Small Group Case Discussion (3) IP case | 5      |
| Small Group Case Discussion (4)         | 5      |
| Exam 1                                  | 25     |
| Exam 2                                  | 25     |
| Exam 3 (Cumulative)                     | 27     |
| Total                                   | 100    |

### Late work/Regrade Policy

- Late work will not be accepted (except for absences in accordance with the University Make-Up Policy).
- Questions regarding exams should be sent to course directors within one week after the exam is administered.

### Absence from Exam

- Dr. Swanoski or Dr. Scheiner must be notified in advance if a student is unable to attend a scheduled exam. A make-up exam will be scheduled only under one of the following circumstances: Illness, family emergency, University-sponsored event.
- Any student with a documented disability who needs accommodations must contact Dr. Swanoski or Dr. Scheiner and Disability Services 612-626-1333 in TC or 218-726-6130 in Duluth **at the beginning of the semester**. All discussions will remain confidential.

### Absence from Small Group Case Discussions

- If a student is ill during an in-class case discussion, the student must contact Dr Swanoski or Dr Scheiner and submit a written case discussion **within 72 hours and** schedule a time for a one on one case discussion/review with the instructor. After this time frame, the student will not be able to make up for the points missed on a case discussion.
- If a student has a non-excused absence for a case discussion the student will not earn any points for the case discussion.

### Minimum Passing Level

60 %

### Course Letter Grades

| Grade | A        | A-      | B+      | B       | B-      | C+      | C       | C-      | D       | F      |
|-------|----------|---------|---------|---------|---------|---------|---------|---------|---------|--------|
| %     | 93.0-100 | 90-92.9 | 87-89.9 | 83-86.9 | 80-82.9 | 77-79.9 | 73-76.9 | 70-72.9 | 60-69.9 | 0-59.9 |

## Schedule

| Week 1 |   |                 |
|--------|---|-----------------|
| Jan 21 | Review of Aging<br>Dr. Swanoski   | Chapter 1, 3    |
|        | Polypharmacy and Adverse Drug Events<br>Dr. Scheiner                                    | Chapter 5       |
| Week 2 |   |                 |
| Jan 28 | Hypertension<br>Dr. Scheiner  | Chapter 7       |
|        | COPD<br>Kelsey Melgaard, PharmD   | Chapter 8       |
| Week 3 |   |                 |
| Feb 4  | Anemia<br>Dr. Swanoski  | Chapter 16      |
|        | Consulting in Long term care<br>Matt Just, PharmD                                       | Chapter 1       |
| Week 4 |   |                 |
| Feb 11 | Stroke and Stroke Rehabilitation<br>Dr Jennifer Olson MD                                | Chapter 7       |
|        | <b>Small Group Case Discussions 1</b><br>Dr. Scheiner/ Dr. Swanoski & Case facilitators |                 |
| Week 5 |   |                 |
| Feb 18 | <b>EXAM 1</b>   | --              |
|        | Depression/Anxiety/Alc Abuse<br>Dr. Swanoski  | Chapter 13      |
| Week 6 |   |                 |
| Feb 25 | Dementia related behaviors<br>Dr. Swanoski  | Chapter 12      |
|        | Delirium<br>Dr. Scheiner  | Chapter 12      |
| Week 7 |   |                 |
| Mar 3  | Heart Failure<br>Dr Scheiner  | Chapter 7       |
|        | Nutrition<br>Mary McGuiggan, PharmD   | Chapter 11 & 12 |
| Week 8 |   |                 |
| Mar 10 | Spring Break  | --              |
|        |   |                 |

| <b>Week 9</b>  |   |            |
|----------------|---|------------|
| Mar 17         | Oral Health in the Elderly<br>Dr. Steve Shuman, (DDS)                                     | Chapter 11 |
|                | <b>Small Group Case Discussion 2</b><br>Dr. Scheiner/Dr. Swanoski & case<br>Facilitators  |            |
| <b>Week 10</b> |   |            |
| Mar 24         | Pharmacist role in Hospice<br>Cassie Furr, PharmD   | Chapter 6  |
|                | Ethics Case Presentation<br>Dr. Tim Stratton  | Chapter 2  |
| <b>Week 11</b> |   |            |
| Mar 31         | <b>EXAM 2</b>   |            |
|                | Diabetes<br>Sakina Zaheer, PharmD   | Chapter 10 |
| <b>Week 12</b> |   |            |
| Apr 7          | End of Life<br>Dr. Sean Kempke  | Chapter 6  |
|                | <b>Small Group Case Discussion 3 -<br/>Interprofessional Case Discussion</b>              | --         |
| <b>Week 13</b> |   |            |
| Apr 14         | Falls<br>Dr Scheiner  | Chapter 15 |
|                | Infectious Disease<br>Dr. Swanoski  | Chapter 17 |
| <b>Week 14</b> |   |            |
| Apr 21         | Glaucoma<br>Sakina Zaheer, PharmD   | Chapter 14 |
|                | Medication Coverage- Part D/<br>Donut Holes<br>Allison Knutson, PharmD                    | Chapter 2  |
| <b>Week 15</b> |   |            |
| Apr 28         | Deprescribing Debate<br>Michaela Wermers PD4<br>Scheiner/Swanoski                         | --         |
|                | <b>Small Group Case Discussions 4</b><br>Dr. Scheiner/Dr. Swanoski & Case<br>facilitators |            |
| <b>Week 16</b> |   |            |
| May 5          | <b>FINAL EXAM CUMULATIVE</b>  |            |

## Due Dates

- Case Study Write-ups (due on same day as small group discussion)
  1. Case 1 due on Feb 11, 2020 by 10:10 am
  2. Case 2 due on Mar 17, 2020 by 10:10 am
  3. Case 3 due on Apr 7, 2020 by 10 am
  4. Case 4 due on Apr 28, 2020 by 10 am
  
- Being Mortal Book Discussion Posts:
  1. Chapters 1, 2, and 3: Feb 4, 2020 by 10:10 am  
    Comment post: Feb 11, 2020 by 11:59pm
  2. Chapters 4, 5, and 6: Feb 25, 2020 by 10:10 am  
    Comment post: Mar 3, 2020 by 11:59pm
  3. Chapters 7, 8, and Epilogue: Apr 14, 2020 by 10:10am  
    Comment post: Apr 21, 2020 by 11:59 pm